GUIDANCE FOR DEVELOPING AND SELECTING QUALITY ASSESSMENTS IN THE SECONDARY CLASSROOM

A PART OF THE ASSESSMENT TOOLKIT

RIDE Rhode Island Department of Education

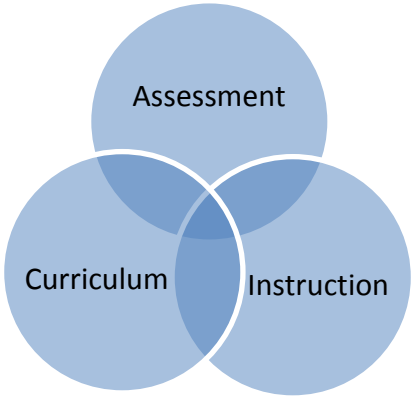
Rhode Island Department of Education & The National Center for the Improvement of Educational Assessment

> "If you don't know where you are going, any road will take you there," observed the Cheshire Cat in Alice in Wonderland

Purpose of this Guide

This *Guidance for Selecting and Developing Quality Assessments in the Secondary Classroom* is intended to assist teachers and school administrators in understanding the critical role that assessments play in the classroom. Assessments are used to gather evidence of learning for a variety of different audiences, including students, teachers, parents, school districts, and state and federal departments of education.

Assessments include a variety of different methods that allow students to demonstrate evidence of learning and can range from student writing samples, research papers, science investigations, performance tasks, unit tests to large-scale standardized tests. Decisions about which assessment to select will depend on its purpose and the audience of the data. This guide is not intended to be a lengthy review of all aspects of assessment nor all the different assessments that are available for the classroom teacher, but rather an introduction to understanding how assessments are directly linked to teaching and learning.



Effective teachers use evidence of learning (assessment) to inform what they teach (the curriculum) and how they teach (instruction).

With this in mind, this guide will provide information on:

- specific assessments appropriate for the 6-12 grade span,
- purpose of the assessments,
- advantages and disadvantages of different types of assessment,
- considerations for a comprehensive assessment system that include daily classroom assessments, local or district developed assessments, and state assessments, when applicable.

Also included at the end of this document is a bibliography of references to help guide you as you delve deeper into the world of assessment!

Table of Contents

A Comprehensive Assessment System

A well-constructed comprehensive assessment system provides continuous, coherent, and high-quality information on student performance that teachers, school leaders, and district and state administrators could use to improve teaching and learning and meet their decision-making needs. At the heart of a comprehensive assessment system is a clear understanding of and alignment to the knowledge and skills and their range of complexity as required by the standards, grade level expectations, and grade span expectations. These standards should be central to all assessments, instruction, and professional development related to teaching and learning. In a comprehensive assessment system, summative assessments, interim assessments, and formative assessments are utilized in a planned and purposeful manner. Teachers play an important role in a comprehensive assessment system by assessing student performance, developing and reviewing tasks, scoring them accurately and reliably, developing and employing effective formative assessments to track student knowledge and skills over time, interpreting assessment results, and modifying instruction based on assessment results. Diagnostic assessments or language proficiency assessments are not the focus of this resource.

Distinguishing Assessments

Formative Assessment: *A process that teachers and students use to gather information during, as opposed to after, the learning process and to make adjustments accordingly.*

Interim Assessments: *Assessments administered during instruction that are designed to evaluate students' knowledge and skills relative to a specific set of goals to inform decisions in the classroom and beyond.*

Summative Assessments: *Formal assessments that are given at the end of a unit, term, course, or academic year.*

The following illustrates the frequency and scope of assessments. Formative assessment occurs at a **high frequency** and focuses on **specific content**. They occur regularly during instruction allowing for a descriptive feedback exchange between the teacher and student regarding specific objectives and learning disposition. Interim assessments occur on a **scheduled basis** during a break in the instructional flow. They measure and record learning of **specific content** at particular points in time, but are broader than formative assessment. Summative assessments occur **infrequently** and cover a **wide scope** of content.

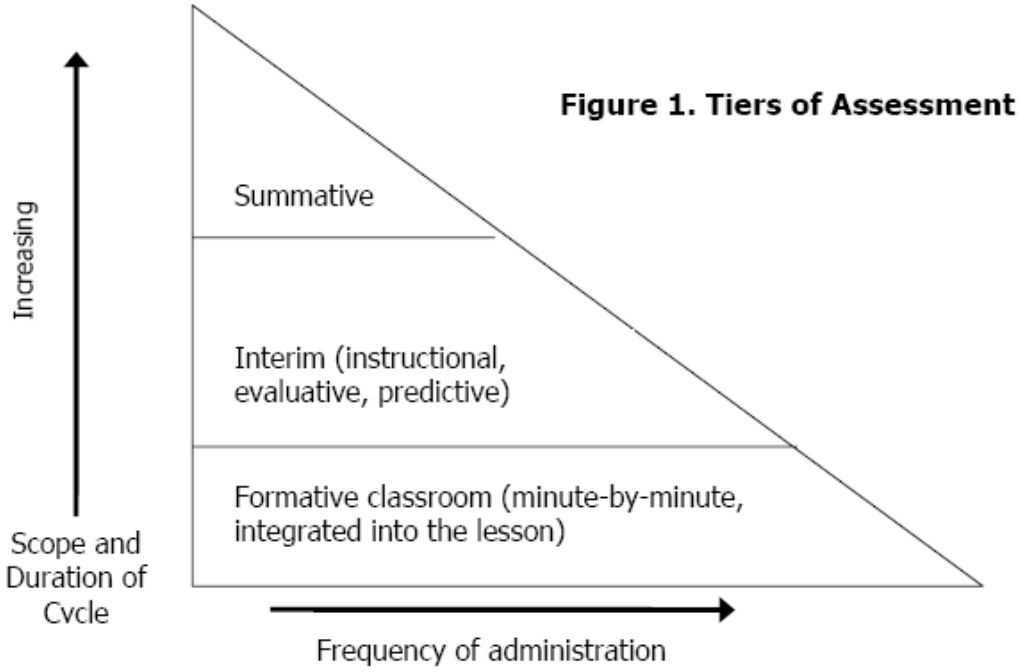


Figure 1. Tiers of Assessment

Source: Policy brief by Aspen/Achieve/Center for Assessment

The following table illustrates the distinctions and different dimensions of each type of assessment. It is not the name or format of an assessment that signifies what type of assessment it is. Rather, its purpose is identified by the ways in which it is administered, interpreted, and how the results are used will help to distinguish the type of assessment. The same assessment can be used in different ways, for different purposes. For example, writing samples can be used formatively throughout the year, and then as a summative assessment at the end of the year. The information below may assist the classroom teacher in determining the assessments to be used in a secondary classroom's comprehensive assessment system.

	Type of Assessment		
	*"Assessment **for** Learning"*	*"Assessment **of** Learning"*	
DIMENSION	**Formative**	**Interim**	**Summative**
Purpose	▪ Instructional	▪ Most designed for managerial uses ▪ Some designed for instructional uses	▪ Managerial
Implementation	▪ Driven by moment-to-moment decisions; generated or selected by teacher; individualized	▪ Regulated by a set of rules developed in or out of the classroom; teacher-generated or externally generated	
Timing	▪ During instruction ▪ High frequency	▪ After instruction or during a break in instructional flow ▪ Moderate frequency	▪ After instruction ▪ Low frequency
Scope	▪ Narrow; one or very few learning objectives at a time	▪ Moderate; a manageable number of objectives	▪ Broad; comprehensive set of objectives
Audience	▪ Classroom (i.e., students, teachers, and parents)	▪ Administration and/or ▪ Classroom	▪ Public ▪ Administration ▪ Classroom
Feedback	▪ Student ⟷ teacher ▪ Descriptive/narrative	▪ School System ⟶ audiences ▪ Mostly evaluative	▪ School System ⟶ audiences ▪ Mostly evaluative

Talbot, T. (June 2011), *Comprehensive Assessment Systems: Purposes and Implementation*

Assessment in the Elementary Classroom

Assessing students in the secondary grades enables teachers to have the data necessary to determine if their teaching methods are working and how well their students are learning. By assessing the progress of individual students as well as the class as a whole, a teacher can judge if his or her instruction of the subject matter has been successful. Assessment results can help answer questions such as whether most students are making adequate progress or struggling, or whether only a small group of individual students are struggling. Using the results of assessments can provide information on whether the teaching methodology is sound, whether changes need to be made, or whether provisions for those few struggling without making major modifications to the instructional plan are warranted. In addition, students at the secondary level need to have a concrete, measurable way to follow their own progress. Assessment expectations and results provide students with a needed indication of knowing if they are succeeding or failing and a way to set achievable goals or make plans to successfully improve their performance.

Creating a comprehensive assessment system for a secondary level (6-12) classroom requires thinking about a host of principles for designing and choosing assessments. The following **principles, objectives, questions, and examples** have been designed to assist the middle and high school classroom teacher with developing a comprehensive assessment system for his or her classroom that provide the necessary information.

A comprehensive assessment system of secondary students includes the following:

Key principles for selecting assessments:	Major objectives
▪ The results of assessments should be beneficial for students (e.g., gain services for students with special needs, to inform instruction by building on what students already know, to improve programs, etc.). ▪ The content of the assessments should allow students to demonstrate progress toward important **learning goals** and be aligned with the subject matter. ▪ The selected assessments should fit the identified **purpose**. ▪ A **variety** of assessment types should be utilized to measure student achievement.	▪ To **identify** students at the beginning of the year who may be "at risk" or who may need extra instruction or intensive interventions if they are to move toward grade-level standards by the end of the year. ▪ To **monitor** all students' progress during the year, to determine whether "at risk" students are making adequate progress, and to identify any students who may be falling behind. ▪ To **collect** information about students that will be helpful in planning instruction to meet their most critical learning needs. ▪ To **assess** whether the instruction provided is sufficient to help students achieve the standards by the end of each year.

When considering the selection of assessments for a comprehensive assessment system, there are five key questions to consider:
1. What are the **best types** of assessments to select for measuring the learning?
2. Are the assessment items and/or expectations **aligned** to the standards? Consider whether the assessment will actually measure what it is supposed to measure.
3. Are the assessment items and/or expectations appropriately **rigorous** (DOK levels aligned to standards) and have an appropriate level of difficulty?
4. Are there **multiple opportunities** throughout the quarter, semester, and year to assess students on the same concepts, using different types of assessments?
5. Are the **directions and vocabulary** clear, ensuring that they don't detract from what students know and are able to demonstrate?

When developing and/or selecting the assessments for classroom progress monitoring, it is important to think about these questions as they will ensure the development and selection of quality assessments. The assessments used by the classroom teacher should be **valid** and **reliable** for the purpose for which it is being used, and **fair** for all students.

A **valid assessment** provides an accurate picture of what students know, understand, and are able to do. It should be aligned to grade appropriate content and the intended level of cognitive rigor.

A **reliable assessment** provides a consistent picture of what students know, understand, and are able to do no matter who scores the assessment.

A **fair assessment** ensures that students are measured only on the basis of the knowledge and skills being measured.

The following assessment approaches are identified as formative; however many of them could be used as an interim or summatively. It is important for the classroom teacher and school administrators to determine the purpose for assessing and which assessments would help reach the expected goals.

Formative Assessment for Classroom Progress Monitoring

Formative assessment is a process used by teachers and students during instruction that provides feedback to adjust ongoing teaching and learning to improve students' achievement of intended instructional outcomes. Formative assessment, both formal and informal, as a way to monitor students' progress is one piece of a comprehensive assessment system.

> *The defining characteristic of formative assessment is its interactive or cyclical nature (Sadler, 1988). At the classroom level, for example, teachers collect information about a student's learning, make corresponding adjustments in their instruction, and continue to collect information. Formative assessment can result in significant learning gains but only when the assessment results are used to inform the instructional and learning process (Black & William, 1998). This condition requires the collection, analysis of, and response to information about student progress.*

The following are some examples of classroom assessment methods that can assist teachers in identifying where students are in their learning, where gaps in their knowledge exist, and to help determine how to improve student learning.

1. Homework and Quizzes

Homework and quizzes are widely used and one of the easiest forms of information to collect formative information about student learning. Since formative assessments are part of instruction that provide students and teachers information about the progress of teaching and learning, they should be "low-stakes". Grades are not considered appropriate for homework and quizzes that are used as formative assessments. The purpose of the homework and quizzes is to gauge students' attainment of course content knowledge, rather than to assess students using a grade, a 'yes/no' or 'pass/fail' score. When developing homework and quizzes, having students respond to questions that require them to apply their thinking to a new situation not discussed in class allows for flexible thinking. These types of questions should reveal how they are *thinking* about concepts rather than being able to respond to what they have memorized.

Example 1:

Students are asked to read a section of a text before they come to class in order to prepare for a lecture on a new topic. The teacher begins the class with a short quiz on the pre-reading and then reviews the correct responses as a whole group. He adjusts his lecture slightly based on the section of the reading that the students had the most difficulty with.

Example 2:

As a homework assignment, students are asked to prepare for a class discussion by selecting quotes from a work of literature that illustrate a particular theme. During the class period, the students conduct a formal discussion while the teacher listens and takes notes, checking off not only which students participate but their apparent level of understanding based upon the textual evidence they provide. After class, he creates a differentiated lesson plan for the next day that

includes meeting with a small group to clarify some misconceptions and an extension activity for students who have already surpassed the learning goal.

Information from formative assessments can help students and teachers note understanding and misunderstanding, as well as students' progress relative to the learning goal. This makes students more engaged and makes teaching more responsive and informed.

Formative quizzes and homework should allow students two answer three questions:

1) *Where am I going?*
   Students should be able to:
   a. align the learning to specific learning goals and success criteria that are provided to the students.
   b. see strong and weak examples of the performance they are expected to create.

2) *Where am I now?*
   Teachers should consider:
   a. administering a non-graded quiz part way through the learning, to help the teacher and students understand who needs to work on what.
   b. highlighting phrases on a scoring guide reflecting specific strengths and areas for improvement and attaching it to student work.
   c. having students identify their own strengths and areas for improvement using success criteria.

3) *How can I close the gap?*
   Teachers should consider:
   a. providing students feedback and have them use it to set goals.
   b. having students describe their progress on specific learning goals.
   c. asking students to comment on their progress.
   d.

According to Chappuis and Chappuis (2008), when students use descriptive feedback from the teacher to learn how to self-assess and set goals, they increase ownership of their own success. "Effective descriptive feedback focuses on the intended learning, identifies specific strengths, points to areas needing improvement, suggests a route of action students can take to close the gap between where they are now and where they need to be, takes into account the amount of corrective feedback the learner can act on at one time, and models the kind of thinking students will engage in when they self-assess."

Examples of descriptive feedback:

- You have interpreted the bars on this graph correctly, but you need to make sure the marks on the *x* and *y* axes are placed at equal intervals.
- What you have written is a hypothesis because it is a proposed explanation. You can improve it by writing it as an "if … then … " statement.
- The narrative texts we have been reading includes a variety of narrative techniques and elements to create a plot sequence. The draft of your fictional story has a clear plot but you will want to consider including narrative techniques to develop the characters and events?

- You have described the similarities between _____ and _____ clearly in this paper, and you have identified key differences. Work on illustrating those differences with concrete examples from the text.

Tips for Using Homework and Quizzes as Formative Assessments:

1. Determine specific success criteria that describe what it will look like when students have met the learning goal. The homework and quiz formative assessment should represent what students need to know, and as a result guide what needs to be taught.

2. Provide clear instructions for students to ensure alignment to expected outcomes.

3. Determine questions that can be completed successfully within a flexible time frame.

4. Use information and materials that are readily available for all students.

5. Questions should reinforce and allow practice of previously taught skills, as well as spark the students' interest for the next class and beyond.

6. Feedback should be timely and provide students information about their strengths and weaknesses, what they know and don't know, and how well they are performing.

Homework and Quizzes	
Advantages	**Potential Challenges**
▪ Provides students practice to help retain information learned when used as part of a focused strategy for increased understanding. Some studies have shown a positive relationship between homework and higher test scores in grades six through twelve ▪ Some studies suggest that students who do homework are more prepared for rigorous assignments in college. ▪ Homework provides an intersection of home and school. ▪ The timeliness of results from quizzes enables teachers to adjust instruction on the specific learning target. ▪ Students can use the results to adjust and improve their own learning.	▪ May be used as busywork. ▪ Teachers believe they need to assign a grade or students won't do the work. ▪ Creating and scoring quality homework and quizzes requires preparation and time. ▪ May assess a narrow focus, dealing with only a few isolated concepts.

Work Samples and Student Portfolios

An on-going assessment technique for students is a systematic collection of **authentic** work placed in a student portfolio. We define **authentic** work as an application of knowledge and skills that reflect situations and problems addressed in the "real" world. Portfolios are valued as an assessment tool because they contain representations of classroom-based performance and supplement instruction. Work samples not only provide reliable information about student achievement of the curriculum, but also provide students with context for assessing their own work and setting meaningful goals for learning. Displaying concrete or digital samples of student work and sharing assessments that illustrate grade level expectations of the outcomes are essential elements of a comprehensive assessment system.

Students should be encouraged to provide evidence of their learning in their work products, including development of thinking through graphic organizers, journals, solved problems that were challenging, problems that have been solved in multiple ways, or problems that the student has extended. Students should state where they see evidence of a strong product or performance and why they think this. Periodically students should select a number of pieces of work that they have analyzed for evidence of understanding and include these work products in a portfolio that provides evidence of their learning over time.

An essential condition of portfolios is that students include written reflections that explain why each sample was selected. The power of the portfolio is derived from the descriptions, reactions and metacognitive reflections that help students achieve their goals. Conferencing with parents, peers and/or teachers helps synthesize learning and celebrate their successes. Some students become adept at writing descriptions and personal reflections of their work without any prompts, whereas other students who have difficulty deciding what to write may be provided sentence starters.

Some examples of authentic work samples for a portfolio can include:

- samples of writing
- art work
- problem solving samples
- science investigations

Example of a seventh grade student portfolio writing samples from a science class:

Within the life science class, the teacher has worked in conjunction with the language arts teacher on reading informational texts and writing an essay in which they use textual evidence to explain how the author developed his/her point of view or how the author organized and developed an argument. This unit included goals related to:

- citing several pieces of textual evidence to support analysis of explicit and information and inferences drawn from the text;
- analysis of the structure used by the author;
- writing informative texts to examine a topic and convey ideas;
- demonstrate command of the conventions of standard English grammar, usage, capitalization, punctuation, and spelling.

Although the teacher could give a test requiring the students to provide understanding of science concepts, essay writing is a test of their application of the skills taught, not just their knowledge. The teacher has decided to evaluate just the product because there are a variety of processes that could lead to production of a well-written descriptive essay and it is not really important which process the student uses.

Sample #1: October

This is a sample of the student's informative text that explains the omnivore's dilemma in a general way and with only one piece of textual evidence related to a reason why the author believes the dilemma exists. There are misconceptions about the text.

"Modern Americans have lost the solution to the omnivores dilemma and today the problem is getting bigger than it has ever been." What Pollan is trying to say is that humans now cannot control themselves as much as they use to before. Now, we eat more than we are supposed to. We have no rule or even culture to follow; we just eat anything that comes in our way. We have a choice of anything to eat but it could be hard to choose.

This does not accurately define or explain the omnivore's dilemma.

We being humans get our vitamins from plants and animals. The food industry gave us a variety of food to choose form. We do not have an easy choice. With us not being able to choose, we actually now use our taste. Relying on our taste could be unhealthy for us.

People have a habit of eating what they see their parents eat for instance, if you were from Mexico you would most likely eat rice, beans, and corn tortillas. Now a day, with all the food that we have, we will eat anything even if we don't know what is in what we are eating. "Thanks to the food industry, we don't even know what it is we're eating".

Factors associated with the dilemma and causes for the dilemma are listed without textual evidence or explanation.
Although there is a general reference to the food industry and taste preferences there is no textual evidence or explanation. *(It is unclear what the student understands from the text.)*

People evolved to have better teeth, brain size, and our taste buds changed to. With this evolution we are used to eating a lot because we need it and we know we need it. Our sweet tooth controls our taste buds. The sweet tooth is something that tells us to eat more because there might not be some later. We eat more than needed. Have a hard time choosing what to eat. Additionally, we eat anything. I agree that Michael Pollon is correct that the omnivores dilema is bad. We need to find at least a little bit of a solution.

Several details from the text are included, but not the explicit reasons the author believes the omnivore's dilemma exists.
(It is unclear what the student understands from the text.)

Instructional Next Steps

Based on the student's work sample, one possible next step would include instructional support to strengthen the student's reading comprehension. The student may benefit from a supported close read of the text and noting on an organizer the author's argument, followed by selecting and explaining details from the text that best support that argument.

Sample #2: February

After several months of instruction, this is a sample of the student's informative text that provides an accurate explanation of most of the text's central ideas in the student's own words. More particular details, including anecdotes and examples, may be used more than is necessary or appropriate for the task or for someone who has not read the text. The summary is distinct from personal opinions or judgments.

Eugene Linden's article "Can Animals Think", talks about the possibility of animals being able to think. He used multiple examples to prove his position that animals can think. One specific example he uses is when an orangutan name Fu Manchu, broke out of his holding cell using a simple wire as a lock pick. Although Fu Manchu had broken out of his cell more than once, the head zookeeper didn't realize Fu was escaping. He thought his employees weren't locking the ape in properly, so the head zookeeper was getting ready to fire some of them. When he finally realized Fu was freeing himself, he was surprised by the animal's ingenius use of a simple tool to gain freedom. Be assessing this action Linden concluded that animals can think.

Clear restatement of one of the central ideas of the text.

An accurate explanation of the central idea is provided in own words.

Trying to further his point, Linden gives many other examples of animals thinking. Many of Linden's examples were on apes, but apes are not the only intelligent group of animals, whales are also very intelligent. One killer whale, an orca named Orky, rescued one of is young. His baby had been getting treated for some health issues after he was born. The zookeepers had removed him from his tank to give him emergency care

Clear restatement of a central idea of the text in own words

and to feed him, but when they went to return the baby whale, he began to vomit. The zookeepers were afraid he would inhale some of the vomit and get pneumonia, but the whale was caught in the stretcher above the tank. Suddenly Orky figured out how he could save his son. He swam under the stretcher, allowing one of the scientists to stand on his head to reach the young orca, and take care of it. This shows that Orky has skills as well. He was able to assess the problem and figure out what his part in the situation should be.

Accurate retelling of the account of Orky's rescue mission, but minor details (e.g., the baby's health issues) are included that do not reflect the essential details of the text.

The last example Linden gave in his text was of a gorilla named Colo who used reasoning skills. One day Colo had found an object in his cage and he picked it up. Realizing that the gorilla had something he should not, Charlene Jendrix went to get the object. When he saw that it was a harmless keychain, she tried to persuade him with some peanuts. Colo didn't respond. Then she tried a pineapple. She was only offering a piece. Colo decided that if he only gets one piece of pineapple then she only gets one piece of key chain. He broke the link and only gave her single piece, showing her what she needed to do to get the link. This shows that Colo used reasoning to get more of something he wanted.

Accurate retelling of the account of Colo's negotiation skills, but minor details (i.e., point-by-point translation of the events) are included that do not reflect the essential details of the text.

Instructional Next Steps

Based on the student's work sample, one possible next step would include working with the student to distinguish between essential and nonessential details in order to make the informational text as concise as possible. The student may benefit from studying and discussing other informational texts noting how the writer distills the main points from the original text without losing meaning.

Tips for Using and Developing Work Samples and Student Portfolios:

1. Determine specific standards, big ideas, and concepts in content areas to monitor and analyze over time.

2. Determine what samples of student work might best illustrate the application of the standard or educational goal (e.g., student created such as writing samples, videotapes, performance tasks, science investigations, interviews, etc.).

3. Develop criteria for students to understand and use when looking at their own or other students' work.

4. Involve students in the selection of materials, in the analysis of their work using established criteria, and in expressing their progress.

5. Use the information gathered from observation to enhance or modify instruction.

6. In order for student work samples and/or a portfolio to be a valid assessment for student learning it must be a thoughtful collection of materials that documents specific learning over time.

Student Portfolios	
Advantages	**Potential Challenges**
▪ Assesses what students know and can do and not just what they know in specific areas over time ▪ Provides goals for student learning ▪ Can include anecdotal records, writing work samples, videotapes, etc. ▪ Are adaptable to different levels of assessments, purposes, and types of materials ▪ Can show both where students are and how they got there ▪ Provides information likely to be used to adjust instruction ▪ Can be shared with students, parents, teachers, and administrators	▪ Can be time and labor intensive ▪ Can be cumbersome to store ▪ Requires carefully defined criteria for review and scoring ▪ Requires training for reviewers ▪ It can be difficult to control outside influences on the product such as parental assistance and access to resources like computers ▪ Not standardized, therefore stakeholders may not know the nature of the assignment, help that was provided, or the quality of other students in the group (although a scoring rubric can help alleviate this challenge).

2. Student Self-Evaluations

Self-evaluation is defined as students reflecting on and judging the quality of their work or learning experience, based on evidence and explicit criteria, for the purpose of improving their work in the future. When we teach students how to assess their own progress, and when they do so against known and challenging quality standards, we find that it can be a valuable learning exercise. This makes it particularly effective for formative assessment. Self-evaluation is a potentially powerful technique because of its impact on student performance through enhanced self-efficacy and increased intrinsic motivation. Self-Evaluations occur through a variety of structures such as student-led conferences, journals, rubrics, surveys, organizers, or goal setting activities.

Rolheiser and Ross suggest a 4-stage model for teaching student self-assessment:

Stage 1: Involve students in *defining the criteria* that will be used to judge their performance. These criteria should be a negotiation of an integrated set of personal and school goals. This involvement provides an opportunity to orient students to the learning expectations.

Stage 2: Teach students how to *apply the criteria* to their own work. Since the goals are not entirely the students, they will need to see teacher modeling and numerous examples that illustrate particular categories.

Stage 3: Give students *feedback* on their self-evaluations. This feedback, whether written or oral, will assist students with recalibrating their understanding of the criteria. Having different sources of feedback (e.g., peers, teacher, parent) provides data for comparison that will help students develop accurate self-evaluations.

Stage 4: Help students *set productive and realistic goals and action plans* based on the feedback and self-evaluative data. Without this support, students may be uncertain whether they have achieved the expected learning.

Assessing Writing:

1) In groups of four, students choose the best paper, then join with a second group and choose the best of the two. This last paper is read to the class as a whole and a class-wide discussion is held about the strengths and weaknesses of the papers chosen, leading to the class discussion on the best paper of the day.

2) In groups of three or four students write out their recommendations for improvement on three or four papers (from students not in the group). The written recommendations go back to the original writer who does a revised draft for next time.

3) In groups of three or four, students take turns reading their papers and discuss the extent to which they have or have not fulfilled the performance criteria relevant to the paper.

4) One student's paper is read aloud slowly to the class while the instructor leads a class-wide discussion on how the paper might be improved. Then the students work in groups of two or three to try to come up with recommendations for improvement for the students in their group (based on the model established by the instructor).

Assessing Speaking:

1) Students teaching students. One of the best ways to learn is to try to teach someone else. If someone has trouble explaining something, it is often because he/she is not as clear as he/she needs to be about what is being explaining.

2) Group Problem Solving. By putting students in a group and giving them a problem or issue to work on together, their mutual articulation and exchanges will often help them to think better. They will often help correct each other, and so learn to correct themselves.

3) Oral test on basic vocabulary. One method that aids student learning is the oral test. Students are given a vocabulary list. They are put into groups of twos or threes and are asked to take turns explaining what the words mean. They are encouraged to assess each other's explanations. When some seem prepared, they are assessed by the teacher. The students who pass then become "certifiers" or "tutors" and are assigned to assess other students (or tutor them). Everyone gets multiple experiences explaining, and hearing explanations of, the basic vocabulary.

Assessing Critical Reading Skills:

1) Place the students into groups of threes, each with a letter assigned (A, B, or C). The teacher then reads a paragraph or two out of the text aloud slowly, commenting on what is being read during reading, explaining what is making immediate sense to you and what you need to figure out by further reading.

2) After modeling in this manner for a couple of paragraphs, ask A to take over and read aloud to B and C, explaining to them, sentence by sentence, what he/she is able to figure out and what he/she is not. After A is finished with two paragraphs, then B and C comment on what they do and do not understand (in the paragraphs that A read).

3) Then the teacher reads aloud to the whole class the two paragraphs that A read, commenting during the reading. Then B takes over and reads the next two paragraphs to A and C. Then A and C add their thoughts. Then the teacher reads aloud what B read. Then going on to C who reads the next two paragraphs to A and B. And so on. As the students are reading in their groups of three, the teacher circulates around the room listening in and getting an idea of the level of proficiency of their critical reading. The more you use this process, the better students get.

Example for Speaking, Discussions and/or Presentations:

Self- Evaluation for Speaking	
Did you speak with a clear voice? With feeling? With good pronunciation?	☐
Did you have good posture? Good eye contact? Good body language?	☐
Did you develop the content?	
Details: When? Where? Who? What? Why? How?	☐
Examples: For example? For instance?	☐
Reasons: Because… My reason is…	☐
Opinions: In my opinion… I believe… My viewpoint is…	☐
Judgments: That was…	☐
Prediction: Next time… In the future…	☐
Did you actively participate?	
Feedback: I see… I agree… I have a different idea/thought…	☐
Interaction: Could you repeat that, please? I have a question…	☐
My area of strength when speaking is…	
One area I need to improve on when speaking is…	
I will do the following to improve…	

Self-Evaluation	
Advantages	**Potential Challenges**
▪ Provides opportunity for students to reflect on their work ▪ Reveals students' perceptions of their strengths and weaknesses ▪ Can provide information about academic and non-academic competencies, such as attitude	▪ Difficult to interpret objectively or without further discussion ▪ Students may either overestimate or underestimate their own abilities

There are a variety of other formative assessment strategies that can be readily adopted for a secondary classroom. Listed below several suggestions that will allow the teacher to determine student understanding, misunderstandings, and misconceptions.

a. **Exit Tickets**

1) Give students "tickets" – small pieces of paper designed to look like tickets, but with space for writing.
2) Ask students two questions. One that requires a factual answer about the big idea of today's lesson, but in their own words. A second question should require more explanation of a concept.
3) Give students five minutes at the end of class to write their answers. Their names do not go on these exit tickets.
4) They must give you an Exit Ticket to leave class for the day.
5) Analyze the tickets to learn how many students got the big idea and how they understand it or misunderstand it. Photocopy 4-6 on a single sheet of paper for your portfolio. Select ones that you learned something about your students from that you didn't know before reading the Exit Tickets.

b. **One-Minute Papers**

1) Give students an open-ended question and one to three minutes to write their answers.
2) Sample questions: What is the most important thing we discussed today? What was the most confusing idea presented today?
3) Collect the papers and use for promoting discussion, identifying misconceptions, or confusion.
4) Photocopy samples of the papers to use with your reflections.

c. **Concept Mapping**

1) Provide small groups of students with a list of about 15 related words that might fit well in an outline. Give them small sticky notes to write the words on.

2) Ask them to create a concept map by moving the sticky notes around on a piece of paper until they have them in the right place.
3) Model for them on the board how to draw connections between words and emphasize that the connections should be labeled with words describing the nature of the relation (leads to, is an example of, sometimes goes with, can't happen without, etc.).
4) Walk around while students are creating their concept maps-ask questions about why they are placing words where they do. Keep in mind that the purpose of this exercise at this point is to find out what they are thinking, not for them to get the right answer. So don't prompt them with correct answers.
5) Collect the papers, analyze them to find out what students know, don't know, and what their misconceptions are. Do not write on the concept maps, though you may want to photocopy one or two examples that helped you adapt your teaching.
6) Create your own concept map-perhaps on overhead transparency.
7) The next day-hand back the concept maps and show your concept map to the class. Emphasize that there is more than one way to organize a group of related terms. Ask groups of students to compare theirs to yours and explain how theirs are different and whether and in what ways they think they should change theirs.

d. **Problem Solving Observation**

1) Give the class a complex problem to solve. Ask them to work in pairs.
2) Good problems will have more than one part and will require students to explain their thinking to each other. It may be helpful to use problems that require students to show their thinking in more than one way. Examples of showing their thinking in more than one way might include graphing, diagramming, explaining how someone with a different perspective might answer the question, and generating examples.
3) Join one of the groups while they work. Have in mind that you are observing and focus in a way that you can write down later what you observed. You may find it helpful to jot down 2 or 3 words during this observation to prompt your recall later.
4) Prompt students to explain their thinking to each other. Ask them to say aloud what they are thinking while they are solving the problem. Prompt them with questions such as "Why" "how are you deciding to" or "What were you thinking about when you did that?"
5) As soon as practical jot down notes about what you observed-especially including notes about student's problem solving process and what they understand about the process.

Tips for Using Formative Assessment Feedback from Students:

1. <u>Engage students in the process.</u> With any of these methods for getting information from and about students, you can engage them in a discussion about their ideas. Present students ideas to the class and use their ideas as a basis for class discussion. Formative assessment strategies should be seen as a dialogue between the teacher and students.

2. <u>See your teaching through your students' eyes.</u> Try to understand how your students are interpreting and making sense of what you are teaching. You can be most effective if you are responsive to your students learning and you can adjust your teaching based on their perspective.

3. Identify misconceptions. Consider where misconceptions are coming from. Identify key misconceptions on the topic you are teaching about-usually there are one or two key misconceptions that are shared by a large number of students. Student misconceptions are very powerful because they are based on student experience. Bring these misconceptions out in the open and find ways for students to challenge their own misconceptions. Common ways for challenging misconceptions include:

    a. Examples that point out why the misconception is not reasonable.

    b. Using visual models that give students an alternative way of understanding.

    c. Active learning strategies that engage students in thinking about the concept.

Interim Assessments

Interim assessments are assessments administered at specified times during a curriculum sequence, to evaluate students' progress of meeting the knowledge and skills relative to standards and grade-level indicators. In addition to progress monitoring, other applications of interim assessments include predicting a student's ability to succeed on a large-scale summative assessment, evaluating a particular educational program or pedagogy, or diagnosing gaps in students' learning. The design and choice of interim assessments is driven by the purpose, intended users, and uses of the instruments. Interim assessments are often created and distributed by government or commercial groups, such as a State Education Agency or a testing company, or are developed locally. Interim assessments may function as an intermediate level between summative purposes and providing affirmation of what has been documented through formative assessment.

While formative assessment is embedded in daily classroom instruction, interim assessment occurs outside of daily classroom instruction. Nevertheless, it should be strategically located and administered within the school's and/or district's curriculum scope and sequence. Interim assessments are often uniform in timing and content across classrooms and schools, and results can be aggregated at the classroom, grade, school, and district levels. These data can then be used to make decisions on how well students are learning, and to determine what action may be needed to accelerate progress toward annual goals.

Scenario:
Consider, for example, one district's first quarter mathematics interim assessment. In the first quarter, eighth grade students learned that a function is a rule that assigns to each input exactly one output and that functions can be represented in a variety of ways including tables, graphs, equations, and verbal descriptions. Additionally, students learned to compare the properties of functions represented in different ways. The teacher has been using formative assessment to determine student understanding of these concepts and adjusting instruction. An interim assessment that identifies good information for planning instruction would provide data on how well students have learned these concepts and can apply them. Ideally, the assessment would also diagnose challenges students encountered in each area. For example a student is asked to select all functions that have the same rate of change as the function y = 2x. He correctly selects a graph whose line runs through the points (-2, -4) and (1, 2) and a verbal description indicating that Maxine will receive a donation of $10 plus an additional $2 for every mile that she runs. However, the student incorrectly selects a table in which all of the x-values are 2. The selected interim assessment would not include items or concepts not taught during that first quarter.

Teachers can use the results from the first quarter interim assessment to plan subsequent math instruction. When administered across classrooms, grade levels, or content areas, interim assessment results provide teachers an opportunity for collaborative reflection, analysis, and action. Leadership teams and school administrators can also use interim assessment results to plan and target specific program interventions to support student learning.

Types of Interim Assessments

There are a wide variety of privately-created interim assessments available, many of which provide performance targets that teachers can aim for in order to ensure that their students are on track for meeting grade-level standards by the end of the school year. Examples[1] of widely used interim assessments are the Acuity (Common Core Language Arts and math), GAINS Interim Assessments (reading and math), Writing Roadmap (online assessment for developing writing skills), NWEA MAP assessments (reading, mathematics, language use, science), and the new Rhode Island Interim Assessments[2]. These assessments help to establish performance targets, or "benchmarks" for different points in the school-year (i.e., beginning, middle, and end) that provide progress-monitoring information or predict success in meeting grade-level standards by the end of the year. When administered at the end of the school year, these tests also identify students who will likely have trouble meeting grade-level standards at the end of the next school year unless they receive extra help. The resulting information is used to adjust instruction for personalized instruction or intervention. Some potential drawbacks of privately-created interim assessments include that they are generally not tied to any one curriculum, they often have few items that assess a high depth of knowledge, and they often do not have any constructed-response items.

On the other end of the spectrum are locally-developed interim assessments. These might include using an item bank, such as the Rhode Island Test Construction Tool, to develop grade-level assessments, or writing original items with a content-alike group to create shared benchmark assessments. In general, developing appropriate interim assessments takes time and practice. Some challenges with this task include creating or selecting a sufficient number of items to provide useful information (e.g., more than one item is included per standard assessed), including a variety of item types, and including items that represent a range of depth of knowledge. In addition, when developing interim assessments, clear rubrics that demonstrate expectations for student work must be created. When done well, the resulting assessments can be of high utility and fully aligned with the score and sequence of the curriculum.

Tips for Selecting and Developing Interim Assessments:

1. Interim assessments must be designed to serve their intended purpose. The assessment should be directly aligned to standards, should serve as an instructional planning tool for teaching and reteaching the content, and measuring a range of complexity and problem solving applications that students should know and be able to demonstrate in a specific content area and at a specific grade level.

2. These assessments should provide diagnostic feedback on student strengths and weaknesses to help identify the source of difficulty.

[1] Note: The assessments listed here are not necessarily recommendations, but rather are examples.
[2] For more information about the Rhode Island Interim Assessments visit www.ride.ri.gov/Interims

3. Results of the assessment should be consistent regardless of who scores the test or when.

4. The interim assessment should include:
    - Reasonable testing time
    - Reasonable cost
    - Appropriate training for administration
    - Useful score reporting and analysis
    - Clear understanding of how the results fit with other assessments
    - Clear understanding of who will use the results

Interim Assessments	
Advantages	**Potential Challenges**
▪ Provide feedback on the academic areas that individual students need the most assistance ▪ When created in alignment with standards, they enable teachers to more accurately gauge student performance against grade level expectations	▪ May not be aligned with standards, state tests, or pacing calendars ▪ Assessments are not given frequently enough to have much impact on instruction ▪ May encourage teaching to the test ▪ May be challenging to create locally at the school- or teacher-level, especially if not using an item bank ▪ Extended scoring time may reduce the value of the assessment data for instruction

Summative Assessments

Summative assessments provide information at the student, classroom, and school levels. When closely tied to curriculum and instruction, summative assessment provides information about a student's achievement of specific learning outcomes. Summative assessments can provide critical information about students' learning at the end of an interval of instruction, as well as an indication of the quality of classroom instruction, especially when they are accompanied by other sources of information.

End-of-Unit Summative Assessments

A well-designed end-of-unit assessment that is aligned to standards provides teachers with information about individual students (identifying any student who failed to meet the outcomes or surpassed the expectations), as well as provides an overall indication of classroom instruction. End-of unit summative assessments should be created prior to instruction to capture and identify both the content and process of learning that represent the desired outcomes. In this way, summative assessments can serve as a guide for directing the curriculum and

instruction. Summative assessments may be created by the teacher, a team of teachers, or may be part of a program or kit (e.g., Full Option Science System-FOSS).

Some examples of summative assessments include:

Locally Developed Assessments (selected response, short constructed response)	
Advantages	**Potential Challenges**
▪ Can be tailored to match the course, program, and curricular objectives ▪ Specific criteria for performance can be established in relation to the curriculum ▪ Results can be obtained quickly ▪ Less expensive than commercial assessments	▪ Can be complex and time consuming to develop valid and reliable assessments. ▪ Results may not be generalized beyond the course, program, or curriculum ▪ Vulnerable to student theft and distribution ▪ May hinder curriculum change if it means that the assessment would have to be revised
Performance Assessments	
Advantages	**Potential Challenges**
▪ Can be used to assess from multiple perspectives (e.g., content, writing, problem solving) ▪ Able to assess transfer of skills and integration of content ▪ May promote student creativity and critical thinking ▪ Can be scored holistically or analytically	▪ Must be carefully designed to ensure student learning of curricular objectives ▪ Can be time consuming and labor intensive to design and score ▪ Inter-rater reliability must be addressed ▪ Scoring can be subjective
Capstone Projects Culminating activity that provides a way for students to demonstrate the knowledge and skills acquired during their secondary school education experience (e.g., in-depth project, reflective portfolio, community service, internship). Through the capstone experience students demonstrate research, communication, and technology skills including additional 21st century skills.	
Advantages	**Potential Challenges**
▪ Are motivational for students ▪ Can be cumulative and allows for integration of knowledge and skills ▪ Invites external evaluation and self-assessment	▪ Can be labor intensive ▪ Can be difficult to coordinate multiple dimensions of learning and assessments ▪ Require carefully defined criteria for review

Annual Standardized Summative Assessments

Standardized summative assessments (i.e., NECAP, PARCC, NAEP, etc.) are for the purpose of measuring student academic achievement and/or comparing performance trends in a district or individual school by grade level, subject matter, demographic groups, etc. These assessments can assist education reform by tracking the progress and levels of achievement of individuals or group of students.

The state assessments hold school districts accountable for raising student academic achievement and identifying schools in need of improvement. The results of these assessments must be reported widely to the public and used by states to demonstrate whether students are making adequate yearly progress (AYP). School systems are held accountable if increasing numbers of students do not obtain proficiency in each subject area tested. These assessments, however, can be utilized by classroom teachers to 1) revise instruction for the entire class or specific courses, and 2) develop specific interventions for individual students.

Classroom-level reports enable teachers to see how a group of students perform across the curriculum. Even if a group of students has moved on to the next grade by the time the score reports are available, teachers can examine class-level results as a source of information for revising curriculum and instruction for the next class. Teachers can also gather information about their own class by examining the score reports from the previous year. Content areas or subtests in which high percentages of children are performing below average indicate areas of deficiency. Once teachers have noted and prioritized deficiencies, they may consider one or more of the following questions:

- Where/when is this content addressed in our district's curriculum?
- At what point in the interval of instruction are these concepts/skills taught?
- How are the students taught these concepts/skills?
- How are students required to demonstrate that they have mastered the concepts/skills? In other words, how are they assessed in the classroom?

Standardized Assessments	
Advantages	**Potential Challenges**
▪ Holds teachers and schools accountable for student learning ▪ Allows for comparison among students from various schools, districts and states ▪ Focuses on a known set of standards and expectations ▪ Objective in nature; often scored by computers or by trained experts and each question is reviewed to remove bias ▪ Provides an accurate comparison between sub-groups (e.g., ethnicity, socioeconomic status, special needs, etc.) to enable schools to develop programs and services directed at assisting these subgroups	▪ Evaluates a student's performance on one particular day and does not take into account external factors ▪ May cause teachers to only "teach to the test" ▪ Evaluates the individual performance of students instead of the overall growth of the student over the year ▪ Can create stress on both educators and students ▪ May be wrongfully used for political agendas

Assessment Informs Instruction

A consistent feature of research findings on formative assessment is that attention to the interactive nature of formative assessment can lead to significant learning gains (Black & William, 1998; Herman et al., 2006). Reviews of research on formative assessment processes support the use of questioning, observation, and student peer- and self-assessment. Frequent monitoring of student progress to a determined goal and performance level results in higher achievement for students, particularly when teachers use the data collected to inform their instructional practices (Stecker et al., 2005).

Formative assessment can be most directly used at the individual student level because it measures how a particular student is progressing in the instructional program and identifies where support or enrichment may be needed. Focusing on the individual provides immediate feedback to the student and teacher on the student's progress within the curriculum. Formative assessment may also be evaluated at the classroom level to inform teaching practices because it reveals how many students may be experiencing difficulty. If many students are having difficulty, then perhaps a more general change in instruction is needed.

Interim assessment data can provide teachers with information of what concepts students have learned and the potential to provide follow-up for struggling students. Interim assessments can be analyzed and used to provide feedback to students, to allow for the re-teaching of necessary foundational skills or concepts, differentiating instruction, and rethinking the way in which a concept was taught. Interim assessments can provide a structured and systematic strategy for examining overall achievement and to identify areas of need that may be overlooked in everyday classroom interactions.

Summative assessment informs instructional practices in a different yet equally important way. Critics of large-scale assessments argue that they are disconnected from instruction and are not useful in the instructional process (Shepard, 2001). However, summative assessment can serve both as a guide to teaching methods and to improving curriculum to better match the needs of the students. A primary use of assessment data is in planning curricula. For example, if a school's performance on a state assessment indicates high percentages of students who do not meet standards in writing, then the school could collect more information on its writing curricula, student writing performance (through portfolios or other classroom work), and professional development needs for its teachers. After collecting such information, the school may then review and adopt new writing curricula as well as provide professional development to its teachers in order to support stronger student achievement in writing. Ongoing evaluation of the writing program would be conducted through the use of formative and summative assessment. In this manner, when summative and formative assessments are aligned, they can inform the instructional process and support both the daily instructional practices of teachers as well as the longer-term planning of curricula and instruction.

Assessment entails a collection of procedures that inform the learning process. Formative, interim, and summative assessments each have a place in the larger system of assessment, instruction, and curriculum. When formative assessments are used in conjunction with interim and summative assessment, the potential exists to improve outcomes for all students. Assessments can only serve this purpose, however, when teachers are supported to make appropriate adjustments in their instruction (Herman et al., 2006; Marsh, 2007).

An Example Secondary Comprehensive Assessment System

Assessment Tool	Type of Assessment	Timeframe	Use of Results
District-wide Writing Proficiency • Writing Roadmap	▪ Interim/Benchmark	December, March, & June	▪ Analyze students' writing ▪ Share results with administration, students, & families
District-wide NWEA Interim Assessment for mathematics	▪ Interim ▪ Formative	October & April	▪ Inform instruction ▪ Share results with administration, students, & families
English • Narrative Writing Samples • Reading Comprehension-Literary Texts	▪ Interim ▪ Summative	Throughout the year End of units	▪ Analyze students' understanding of literary elements ▪ Inform instruction ▪ Share results with administration, students, & families
Math • Performance Tasks • Argumentative Writing	▪ Summative	Throughout the year	▪ Inform instruction ▪ Share results with administration, students, & families
Science • Unit Summative Performance Assessments • Research • Informational Writing • Argumentative Writing	• Interim • Summative	**Performance Assessment:** End of unit – approximately every 6 weeks **Research** – once a semester **Writing:** Throughout the year	▪ Inform instruction ▪ Analyze students' writing ▪ Share results with administration, students, & families
Social Studies • Unit Summative Performance Assessments • Research • Informational Writing • Argumentative Writing	• Interim • Summative	**Performance Assessment:** End of unit – approximately every 6 weeks **Research** – once a semester **Writing:** Throughout the year	▪ Inform instruction ▪ Analyze students' writing ▪ Share results with administration, students, & families
Various formative assessments	• Formative	Throughout the year – daily in all subjects	▪ Inform instruction
Homework and Quizzes	• Formative	Throughout the year – daily in all subjects	▪ Inform instruction

* Note: Every LEA will make decisions on which content area assessments are appropriate for use in their comprehensive assessment system.

This secondary level comprehensive assessment system example includes a **blend of formative, interim, and summative** assessments that measure a **range** of written and performance tasks and observational information. **Various** assessments administered at multiple times during the year allow for monitoring and measuring progress of standards and grade level expectations. In addition, the assessments allow for examining skills in both an isolated manner, as well as through application in a performance task which increases the expectation of **complexity and rigor**.

Creating a Comprehensive Assessment in your Class

1) **Take stock** – What types of assessments do you currently use in your classroom, your school, and your district? What are the overlaps? What are the gaps? For example, consider whether all the reading assessments used focus on basic comprehension, but not on text-dependent analysis. There may be overlaps and gaps.

2) **Identify appropriate assessments available** – Determine which assessments can be eliminated and what assessments need to be added. Be sure to consider whether these assessments are the best type to measure the intended learning and whether they are valid and fair assessments (see page 8) for the purpose for which they are being used. To learn more about the different assessments, refer to the reference section on the following pages and to the RIDE website to help you learn more about assessments appropriate to the grade you teach.

3) **Develop an assessment schedule** – ensure that there is appropriate time between assessments to allow for grouping students based on instructional needs, formative assessment built into the daily instruction, and time to adjust instruction and provide feedback to students based on the data. Then, considering the type of assessment, determine the appropriate times to implement the assessment.

Bibliography

Comprehensive Assessment Systems

Alliance for Excellent Education, Policy Brief, February 2010, www.all4ed.org

Comprehensive Assessment System: Rhode Island Criteria & Guidance

Herman, J. L., Osmundson, E., Ayala, C., Schneider, S., & Timms, M. (2006). The nature and impact of teachers' formative assessment practices. CSE Technical Report #703. National Center for Research on Evaluation, Standards, and Student Testing (CRESST).

Marsh, C. J. (2007). A critical analysis of the use of formative assessment in schools. *Educational Research and Policy Practice, 6*, 25–29.

Perie, M., Marion, S., & Gong, B. (2009), *Moving Toward a Comprehensive Assessment System: A Framework for Considering Interim Assessments*, National Council on Measurement in Education.

Shepard, L. A. (2001). The role of classroom assessment in teaching and learning. In V. Richardson (Ed.), *Handbook of research on teaching* (4th ed., pp. 1066–1101). Washington, DC: AERA.

Stecker, P. M., Fuchs, L. S., & Fuchs, D. (2005). Using curriculum-based measurement to improve student achievement: Review of research. *Psychology in the Schools*, 42, 795–819.

Stiggins, R. J. (2002). Assessment crisis: The absence of assessment for learning. Phi Delta Kappan International. Retrieved April 18, 2008, from http://www.pdkintl.org/kappan/k0206sti.htm.

Talbot, T. (June 2011), *Comprehensive Assessment Systems: Purposes and Implementation*, Research Watch, Evaluation and Research Department, http://www.wcpss.net/results/reports/2011/1110cas.pdf

Torgesen, J. (2006), *A Comprehensive K-3 Reading Assessment Plan*, Center on Instruction.

Assessments in the Secondary Grades

Damiani, V., Portfolio Assessment in the Classroom, NASP; http://www.nasponline.org/communications/spawareness/portfolioassess.pdf

Friendships Sadler, D. R. (1988). Formative assessment: Revisiting the territory. *Assessment in Education, 5*, 77–84.

Rolheiser, C. & Ross, J., Center for Development and Learning; *Student Self-Evaluation: What Research Says and What Practice Shows;* http://www.cdl.org/resource-library/articles/self_eval.php

Interim Assessments

Coffey, H., *Benchmark Assessments,* Learn NC, http://www.learnnc.org/lp/pages/5317

Herman, J., Osmundson, E., Dietel, R. (2010), *Benchmarking Assessment for Improved Learning*, Assessment and Acountability Comprehensive Center

Marshall, K. (2006), *Interim Assessments: Keys to successful implementation*, New Leaders for New Schools, http://www.marshallmemo.com/articles/Interim%20Assmt%20Report%20Apr.%2012,%2006.pdf

Assessment Overview

Black, P., & William, D. (1998). Assessment and classroom learning. Assessment in Education, 5(1), 7–74.

Meador, D., *Standardized Testing: Pros and Cons of Standardized Testing*; http://teaching.about.com/od/assess/a/Standardized-Testing.htm

Mertler, C., *Using Standardized Test Data To Guide Instruction and Intervention*, ERIC Digest; http://www.ericdigests.org/2003-4/standardized-test.html

Morningside College, *Assessment Handbook* Advantages and Disadvantages of Various Assessment Methods (March 2006), http://www.morningside.edu/academics/research/assessment/documents/advantagesdisadvantages.pdf

Wright, B. (2002), *Advantages and Disadvantages of Assessment Techniques*, http://www.nvcc.edu/about-nova/directories--offices/administrative-offices/assessment/loop/step3/advantagemethods.pdf

Assessment Examples

AFT (2011), *Assigning Effective Homework*, http://www.aft.org/pdfs/tools4teachers/ST_Homework0411.pdf

Chappuis, S. & Chappuis, J. (Dec. 2007/Jan. 2008), *The Best Value in Formative Assessment*, Educational Leadership, ASCD, http://www.ascd.org/publications/educational-leadership/dec07/vol65/num04/The-Best-Value-in-Formative-Assessment.aspx

Formative Assessment Strategies, http://quipsd.org/cms/lib02/PA01000753/Centricity/Domain/292/Formative%20Assessment%20Strategies.pdf

Marzano, R. (2007), *The Art and Science of Teaching: A comprehensive framework for effective instruction*, ASCD, Alexandria, VA.

McGraw Hill Education/CTB, *Acuity*, http://www.ctb.com/ctb.com/control/ctbProductViewAction?p=products&productFamilyId=444&productId=37657

NWEA

NYC Department of Education (2013), *Tasks, Units & Student Work Grade 6 Literacy: Can Animals Think and Grade 7 Literacy: The Omnivore's Dilemma,* http://schools.nyc.gov/Academics/CommonCoreLibrary/TasksUnitsStudentWork/default.htm

Student Portfolios: Classroom Uses (1993), Office of Research, Education Consumer Guide, http://www2.ed.gov/pubs/OR/ConsumerGuides/classuse.html

The Critical Thinking Community (2013), *Structures for Student Self-Assessment,* http://www.criticalthinking.org/pages/structures-for-student-self-assessment/458

Wilson, M. (2011), *Homework: Why Do It?*, MST Mathematics Education, http://www.education.com/reference/article/homework-why-do-it/